Newsletter of the North American Mycological Association

THE MYCOPHILE

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Save The Date!
NAMA Annual Foray 2013
October 24 – 27, 2013
Mushroom collecting in the heart of
the Ozark National Forest, Arkansas
Hosted by the Arkansas Mycological Society
Details coming next Spring!
Visit the NAMA website
to find information on
cultivation, our publications,
The Mycophile and Mykoweb,
mushroom poisonings,
medicinal mushrooms
programs and the
NAMA Speakers Bureau!
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Learn about NAMA's
participation in a new
scientific endeavor,
the North American
Mycoflora Project
NAMA Lowers Dues for 2013
By sending publications electronically,
we have lowered our costs, and we're
passing the savings along to you.
We lowered dues to make membership
and renewal a better value.
$24 members of affiliated clubs (electronic)
$30 members of affiliated clubs (print)
$29 individual/family membership (electronic)
$35 individual/family membership (print)
You can now renew your dues online!

NAMA 2013 ARKANSAS FORAY!

(Details coming in next issue of The Mycophile)

LOCATION: Shepherd of the Ozarks, Arkansas (which is about 115 miles and 2.5 hours north of Little Rock) **Website:** http://www.sotocamp.com/ *Shepherd of the Ozarks* is a year-round 460 acre Christian Conference/Retreat center located in the heart of the Ozark Mountains in Arkansas. Here you can enjoy many activities including hiking, exploring, horseback riding, swimming, canoeing, fishing, floating, snorkeling, volleyball, frisbee golf, and the extreme adventure sports of high personal challenge - Ropes Course, Wilderness Paintball, as well as visiting the petting zoo and watching the natural wildlife. Nestled in this wilderness setting are ten luxurious log-cabin-style lodges varying in decor and size to sleep from 6 to a group of 400 people. All of them include kitchens, meeting rooms, private bedrooms and bunk areas. Massive rock fireplaces, rocking chairs on the porch and comfortable beds invite you to come away for refreshment and relaxation. (*Jay Justice*)

NAMA LOWERS DUES FOR 2013!

By sending publications electronically, NAMA's costs are lowered. We are passing the savings onto our members beginning this year.

$24 for members of affiliated clubs (electronic delivery of publications)
$30 for members of affiliated clubs (mail delivery for print versions)

$29 for non-affiliated club members (electronic)
$35 for non-affiliated club members (print)

FORAYS and EVENTS for 2013

This section of the newsletter is reserved for publicizing the annual forays and events of NAMA member clubs. If you would like us to list your club's next big event, contact us with details you would like displayed here and send to dianna.smith@comcast.net

Aug. 30-Sept. 2: COMA's Clark Rogerson Foray at the Hemlocks Easter Seals Camp in Hebron, CT over Labor Day weekend. Everyone is welcome whether a member or not. Invited mycologists include Gary Lincoff, Roz Lowen, Bill Yule and others. Details on pricing and registration form will be available on line at www.comafungi.org.

Eagle Hill Institute Mycology Workshops in Steuben, Maine
PO Box 9, 59 Eagle Hill Road, Steuben, ME 04680-0009
Phone: 207-546-2821, FAX: 207-546-3042
office@eaglehill.us ... www.eaglehill.us
July 28-Aug. 3: Mushroom Identification for New Mycophiles: Foraging for Edible and Medicinal Mushrooms with Greg A. Marley and Michaeline Mulvey
Sept. 8-14: Boletes of North America: A Field Seminar and Workshop with Alan E. Bessette and Arleen R. Bessette

Oct. 24-27: Arkansas Mycological Society hosts the 2013 NAMA Foray.
Approximate cost to Participants:
(58) Premium Beds (Private Rooms) with (8) Meals $315 - $325/person
(50+) Non-Premium Beds (Bunk Areas) with (8) Meals $275 - $290/person
Meals Only (Residing Off-site) $150 - $165/person
Proposed collecting areas include well-known areas in the Ozark National Forest and hopefully at least one all-day collecting trip visiting the Buffalo National River area.
(Membership in NAMA is required to attend NAMA Forays).

IN THIS ISSUE

NAMA 2013 foray, website and dues news..... 1
Forays and Events for 2013..... 2
Reflections on the 2012 NAMA Foray..... 3-7
Mushroom Photos from the Foray by John Plischke III.....7
NAMA 2012 People Photos by Jerry Sheine.....8
Winning NAMA 2012 Pictorial Contest Photos..... 9
Culturing Mushrooms on Agar.....10-11
How Long Do Fungal Spores Live?.....12-14
President's Service Awards.....15
NAMA Annual Award Guidelines.....16
Education Needs Committee Volunteers.....17
Book Review: Tricholomas of N.A.....18
Predatory Fungi.....19
Mushrooms in Works of Art.....20-21
Letter from NAMA's new President, David Rust.....22
Membership Application.....23
Mushroom of the Issue.....24

Steve Trudell at NAMA Foray holding *Gymnopilus*: Photo by Jay Justice

2012 NAMA Larry Stickney Memorial Foray: Reflections by Three Participants December 13-16. Mission Springs, Scotts Valley, California

It was a really good foray!
Some of us arrived early to attend the all day Trustees' Meeting on Wednesday: David Rust was elected to be the new president and Martin Osis the new first vice president. The dues were somewhat lowered, to reflect savings from electronic mail. And the club representatives shared interesting tips about activities their clubs found helpful for attracting and keeping members.

On Thursday morning, a few friends and I went out to visit the sea lions. But it seems that once a year they get a two-week vacation from tourists, just while we were there, so the two state parks we tried were closed. The first one had a ranger who showed us poison oak, a big luxuriant hedge of bare bushes—no leaves in winter. The second one, Butano, had no ranger, so we went in "owning" the park. At one point, a ranger found us. I explained that we were taking pictures and neglected to say that we were also picking mushrooms. And there were loads of them….

It was the beginning of the west coast rainy season—the mushrooms had been eagerly awaiting the rain and by now had appeared all over. So the collectors returned from their walks smiling, with baskets full of fresh specimens, and the display tables got loaded ("Please, no more Suillus!"). The checklist included about 350 taxa, excellent for two and a half days of collecting….

Especially as there was such a frustratingly rich offering of incentives--lectures and workshops-- to stay "home" for: Steve Trudell's photography workshop, Fred Stevens' montane puffballs, Debbie Viess' western Amanitas, Daniel Winkler's Tibet's mushroom paradise, Rick Kerrigan's California Agaricus, Shannon Nix's microscopy workshop, Tom Volk's hidden gems of mycology (where I learned that my favorite edible, Cantharellus *cibarius*, no longer exists in the US), David Rust on sudden oak death (but slow to move to the east coast), Roy Halling's Australian boletes, John Plischke III's fungi on fungi, Julie Schreiber's cooking demonstration. Then there were Tom Bruns & Karen Nakasone's crust fungus workshop, Robert Rogers' medicinal mushrooms, Susan Hopkins' tooth fungi, Kyle Garrone's mushroom cultivation workshop, Michael Beug's interesting mushroom poisonings, Nathan Wilson & Barbara Thiers' NA Mycoflora vouchering workshop, Noah Siegel's California boletes, Genevieve Gates' Tasmanian fungi, Jim Trappe's trees, truffles and beasts, Darvin DeShazer' California polypores.

Evening presentations included a remembrance of Larry Stickney, a naturalist's introduction to Santa Cruz County, and an overview of the mushrooms of the redwood coast by Noah Siegel and Christian Schwartz, Dennis Desjardin's illuminating fungi, Else Vellinga's description of North American Mycoflora, and David Arora's fungi game, as well as the awards: the NAMA awards to Cathy Cripps and Dianna Smith, and the President's award also to Dianna Smith, as well as Adele Mehta and Linnea Gillman. Congratulations to all for these well-deserved honors.

The place was beautiful: we were in a "rain forest", surrounded by redwoods bathed in mist every morning and evening. The accommodations were great, the food was good and plentiful….

But the best culinary event was, of course, Ursula Pohl's mushroom tasting. Once again, she wrought a miracle. Working in a small apartment-sized kitchen, she and her team prepped and cooked enough delicacies for 250 people; the food and utensils needed to be transported down two flights of stairs, then driven, then carried and set up: chicken liver paté with mushrooms, marinated mushrooms, sautéed boletes, sautéed matsutake, etc. etc., all served on divided plates. That's genius!

Thanks and congratulations to them and, of course, to the energetic foray organizers: Noah Siegel, Christian Schwarz, Alissa Allen, as well as the registrar: Ann Bornstein.

Any nitpicking would be a bit of a stretch but here goes: The Mission is dry, so there was water, soda, wine, coffee and tea at the socials but—shsh—wine at our parties in our rooms. The weather was unseasonably cold but that was good for the mushrooms in the display area. It rained a bit but no one complained: mushroomers are hardy after all. And repeat: NOBODY COMPLAINED ABOUT ANYTHING!

Speaking for myself, I was really excited, and I believe there were many others who shared my reactions. This was my first West Coast foray and the first foray ever for many others I talked with. I did not know the trees or the names of most mushrooms. What a challenge!

And what a pleasure to meet so many interesting new people!

Ursula Hoffmann, New York

Back row: Tom Bruns, Debbie Viess, Nathan Wilson, Susan Hopkins Roy Halling, Darvin Deshazer, Michael Beug, Daniel Winkler, Robert Rogers, John Plischke III, Tom Volk, Steve Trudell
Front row: Jim Trappe, Allisa Allen, Noah Siegel, Else Vellinga, Dennis Desjardin, Susan Hopkins?, Rick Kerrigan, Barbara Thiers, Genevieve Gates, Shannon Nix, Ursula Pohl, Karen Nakasone, Julie Schreiber, Christian Schwarz *Faculty Photo by Alissa Allen*

So there I was in Scotts Valley, CA at the 2012 NAMA Larry Stickney Memorial Foray. Me, just l'il ole me and who do I encounter? Well, there was Gary Lincoff, writer of the mushroom bible, *The Audubon Field Guide to North American Mushrooms*, giving a beginner foray. I'm no beginner, but I'll go on a foray with Gary anytime. Then there was the outstanding talk, given by rock star Tom Volk, on Cryptic Species. Actually, the discussion was on the ever-changing names some of our most loved mushrooms—*Morchella, Cantharellus, Armillaria, Laetiporus*. What's a person to do? The Friday night talk by Dennis Desjardin (researcher and writer of how many books???) was truly illuminating—yes, it was on fungal bioluminescence! And The Wheel of Fungi talk and show given Saturday night by David Arora, writer of the other bible, *Mushrooms Demystified*, was incredibly clever and loads of fun. He sure knows how to tell a story! Then there were the other accomplished suspects: Else Vellinga, Steve Trudell, Michael Beug, Roy Halling, John Plischke III, Barbara Thiers, and my dear myco-friends Britt Bunyard, Jay Justice, Daniel Winkler, not to mention the exceptional planners of the entire week-end, wild and crazy Noah Siegel and Christian Schwarz.

I can't express how honored I feel to be a part of NAMA and to be able to associate with the likes of these folks. What a fabulous week-end it was. Thank you speakers, mycologists, planners and participants.

Maxine Stone

Author: *Missouri's Wild Mushrooms*

Missouri Mycological Society

Julie Schreiber Doing a Cooking Demonstration: Jay Justice

MORE FORAY REFLECTIONS: Over the past 27 years, I have participated in 22 NAMA forays beginning with my first one in 1985 at Canaan Valley, WV. This year was the second time that I experienced a NAMA foray in California - the first was the foray at Asilomar in February, 1998.

Following a custom that has been used at NAMA forays for several years now, this year's NAMA foray was dedicated to reminiscing about and honoring an individual who was known for promoting mushrooming in the selected area where the foray was held.

NAMA – 2012 was dedicated to the memory of Laurence (Larry) Stickney, a longtime member and four time past president of the Mycological Society of San Francisco, who had passed away on June 12, 2010. On Thursday night Debbie Viess and David Rust stood before the crowd and shared some memories about Larry taken from letters that NAMA members had contributed for this occasion. Since Larry had attended many NAMA forays during his forty years of mushrooming, many of those present in the room had their own memories of interacting with him at NAMA forays.

Photo by Jay Justice

If asked to give an overall rating for this year's foray using the familiar letter grade scaling system applied in school systems throughout the U.S. (A-F), then I would rate this year's NAMA foray with a big A! I feel that the NAMA – 2012 foray should go down in history as one of the best NAMA forays I have had the privilege to attend over the past 27 years!

Perhaps you are now curious in knowing why I consider this year's foray to be an outstanding one?

(1) The campus at the Mission Springs facility was smaller in comparison to many of the college campuses that past NAMA forays had often been held. Thus, walking from one location to another was a shorter distance than it had been at other NAMA forays. The occurrence of some large redwood trees on the property of the campus was a nice additional plus to the overall ambience of the campus.
(2) The program that Noah and Christian developed was a superb one indeed. I will confess that at some, if not many NAMA forays that I have attended, I did not go on any of the forays, opting instead to listen to the scheduled lectures that were available. After an initial review of the program at this year's foray, I made the decision that I would go on one foray on Friday morning then stay on campus the remainder of my time at the foray and take in the lectures and/or workshops that were available.

The foray that I and 13 other mushroomers signed up for found us at a location where native stands of Monterey Pines still existed along the edges of some large open fields. While this foray was touted as a location where a rare, nonmycorrhizal and unnamed *Lepidella* had been previously collected, we were not able to locate any on our foray. However, no one seemed disappointed in the diversity of mushrooms and fungi that we did collect. Among the showy or interesting macrofungi that were collected included the intensely red colored *Russula sanguinea*, the yellow staining *Agaricus xanthodermus,* and a couple of large specimens of *Amanita constricta*. While some of my fellow forayers scored big with some specimens of porcinci, (most likely *Boletus edulis* var. *grandedulis*), I was the only person in the group that collected a specimen of *Ganoderma oregonense*.

The remainder of my time on Friday and Saturday I used to attend a workshop and several of the great lectures that were available to foray participants. Of the five workshops that were offered, I decided to attend the one on Crust Fungi where under the supervision of Drs. Tom Bruns and Karen Nakasone, we received instructions concerning some salient features of crust fungi that could be seen using a compound microscope that could be used to distinguishing certain crust fungi from others. Informative commentary provided by the amateur and professional mycologists in the room certainly added to the enjoyment I experienced from participating in the workshop.

I opted to listen to three lectures during the course of the foray. The lectures I chose were "Boletes of Australia", presented by Roy Halling, "Tasmanian Fungi" presented by Genevieve Gates, and "Let it Rot! California Polypores" presented by Darvin DeShazer.

While the lecture offerings during the daylight hours were excellent, they were only "warm up" acts for the wonderful lecture and the tremendous performance that we experienced Friday and Saturday night.

On Friday night Dr. Dennis Desjardin regaled the audience with a high-powered presentation of the phenomena of bioluminescence in selected mushrooms. He related that only about 72 species of basidiomycota are known to bioluminese and they are all saprotrophic mushrooms.

As entertaining as Dennis' presentation was, I don't think that anyone could have guessed that the best presentation was to come the following night.

I think the best word to describe what David Arora gave to the audience on Saturday night would be a performance, rather than a presentation. I viewed his time on the stage as being reminiscent of a performance that a well-known actor might give as a solo act on a stage.

David used his "Wheel of the Fungi", a type of wheel with spokes that was mounted vertically and been decorated with images of different types of mushrooms and mycological themes. Members of the audience were selected by him and then invited to come to the stage to spin the wheel. Whichever mushroom image the marker fell on when the wheel quit spinning was the topic that David then spoke about. He used several different ways of delivering the selected information - reciting stories from memory, reading from a notebook that he had at his disposal and sometimes showing slides or videos to impart the message that he wanted to get across. All of the stories that he told were highly entertaining and many of them shared a common theme, that being the enthusiasm or immense pleasure mushroomers experience from searching and finding their favorite highly prized edible mushroom.

Photo by Jay Justice

(3) And last, but not to be considered the least of the reasons I viewed the NAMA 2012 foray to have been a great success, was the diversity of the mushrooms collected.

The amount of macrofungi collected was impressive indeed. There were ample species of Amanitas and Boletes in addition to some interesting specimens of *Russula*, *Lactarius* and *Tricholoma*.

(Continued on next page)

Some of the mushrooms at the display area were impressive because of their large size. I measured a cap of *Gymnopilus spectabilis/junonius/ventricosus* and determined it to be 16.5" across. Other mushrooms with large cap diameters included honey mushrooms (*Armillaria solidipes*) at 7", a Matsutake cap at 9" and the cap of a specimen of *Amanita calyptroderma* at 9.5"

My home club, the Arkansas Mycological Society has accepted the responsibility of hosting the NAMA foray in 2013. While l don't know if we will be able to offer NAMA members a foray that will be the same caliber as this year's foray, we are going to give it our best attempt.

Jay Justice

SOME OF THE AMAZING MUSHROOMS FOUND AT THE 2012 NAMA FORAY

Rhizopogon occidentalis : John Plischke III

Amanita calyptroderma: John Plischke III

Cortinarius regalis: John Plischke III

Tricholoma arvernense: John Plischke III

NAMA 2012 FORAY PHOTOS

By Jerry Sheine

Allein Stanley

Ursula Pohl, Linnea Gillman and Sandy Sheine

John Plischke III

Debbie Viess and David Rust

Noah Siegel and Christian Schwarz

TOP 2012 NAMA PHOTOGRAPHY AWARDS

for photos in the Pictorial Category

Crepidotus cinnabarinus Renée Lebeuf 1st place

Boletus rhodosanguineus Renée Lebeuf
2nd place

Cookeina sulcipes Todd Elliott 3rd place

Culturing mushrooms on agar that has been poured into plastic soufflé cups.

By Jim Tunney of NAMA's Cultivation Committee

I wrote an article about using small jars for agar for the Mycophile that was published in the September/October 2006 issue. I still use this method sometimes, but it has a big drawback; the jars take up a lot of space. What I do use the 8-ounce jars for though is grain spawn; as a container for grain spawn they are relatively small. Two years prior to this article I received as a gift a case of 500 60 mm petri dishes. These lasted me about 3 years. I would pour 40 to 60 plates to have around in case I came across something that I felt like growing. When I tried to get another case, they wouldn't sell to me. So I thought about the plastic soufflé cups that I use at work.

Where I buy them, at a party store, they come in plastic sleeves of 125 and in different sizes ranging from a half ounce up to 5 ounces. It costs me about 7 cents for a cup and a lid. This is about 1/3 the price of plastic petri dishes.

The recipe I'm following now for my Potato Agar is half a gallon of potato broth, 18 grams of agar, about 2 grams of nutritional yeast, and about 10 grams of sugar. The only thing about this recipe that I follow to the letter is the ratio of agar to broth. Sometimes I just put in a pinch of yeast. Sometimes I weigh it. The sugar is sometimes table sugar and sometimes some other sugar. I've used Maple sugar, honey, brown sugar, palm sugar, agave sugar; pretty much whatever sugar strikes my fancy when making up the agar. Every time I use a new sugar, I'm thinking, oh the mycelium is going to love this one, but I haven't noticed a difference in the way the cultures I've grown behave from sugar to sugar.

The process of pouring agar in soufflé cups is very similar to the one used to pour petri dishes. I sterilize the agar in beer bottles, 9 ounces of Potato Agar in 16 ounce beer bottles or 7 ounces of Potato Agar in 12 ounce bottles. In the opening of each bottle I put some polypropylene pillow filling and cap it loosely with a small piece of aluminum foil and then into the pressure cooker.

The soufflé cups are made from number 5 plastic polypropylene, and will not melt when agar is poured into them. The lids are number 4 plastic and are not as heat resistant as the cups. They will warp if they agar is poured and capped when it is too hot, so I let the agar cool to somewhere near 140 Fahrenheit before I pour. In my glove box, I pour my agar into the soufflé cups from the sterilized beer bottles full of potato agar pouring about 2/3 of an ounce in each 2 ounce cup, quickly putting a lid on it and stacking them. When I first started using the soufflé cups, I was concerned that they might not be sterile, but apparently they are. I have had few contaminates show up in the cups. In fact I poured 160 cups in the last two batches and there was no contamination.

The poured cups have a good shelf life. I've used cups that had been poured 5 months prior with good results. The cups with the lids on are pretty airtight and there is very little shrinkage of the agar media from evaporation even after 5 months.

Some of the species I've cultured in these containers and that later fruited on different mediums are *Lentinus tigrinus, Pleurotus populinus, Pholiota aurivella* and *Lepista tarda*.

All demonstration photos are by Jim Tunney

ATTENTION: If your club produces a newsletter, please be so kind as to ask the editor to put both new president David Rust (incredulis@yahoo.com) and myself (dianna.smith@comcast.net) on the club's e-mail list to receive copies. If you are missing a copy of The Mycophile issued in 2012, contact me for the missing issue.

Support Mushroom the Journal and FUNGI Magazine.

Comment/Correction noted to "Distant Harvests" article in

November-December issue of The Mycophile

Richard Doyle of Cincinnati enjoyed the article on "Distant Harvests (the Christmas edition)", but noted it had a technical error. "The hallucinogenic component of *A. muscaria* is NOT psilocybin!! That is the hallucinogenic component of the "magic mushrooms", *Psilocybe mexicana* and related species, from South and Central America popularized in the 50s and 60s by R. Gordon Wasson, Timothy Leary and others. The hallucinogenic principle in *A. muscaria* is an amino acid called "ibotenic acid" and its effects are completely different from those of psilocybin and are similar to those described in the article".

How long do fungal spores live?

By Nhu Nguyen

Spores of *Rhizopogon salebrosus*, one of the species discussed in the article. Photo by Nhu Nguyen

"How long do fungal spores live?" seems like a pretty obvious question, but in reality, we don't really know. The good news is that mycologists are starting to take interest in this question and running long-term experiments to answer one of the most basic questions in mycology.

For many years, the few examples that exist that clue us in to how long fungi can live come from observations of pathogenic fungi. The resting sporangia (structures that contain spores) of the potato wart disease fungus *Synchytrium endobioticum* (Thaxter 1890), the resting sporangia of the soil fungus *Allomyces macrogynus* (J. W. Taylor per. communication), and spores of the onion smut fungus *Urocystis cepulae* (Putnam & Sindermann 1994) are thought to last >25 years in the soil. However, the evidence in all three cases is anecdotal without specific experiments to back them up.
As to saprobic and mycorrhizal basidiomycetes, there have only been a few studies that tell us about the spore longevity of these fungi. Unfortunately, all of these studies end within one year. So based on this, we know that at least a few mushroom forming species have spores that could last up to one year. But what about long-term survival?

Can we continue observing these spores for their viability year after year? Of course we can!

In 2004, Tom Bruns at UC Berkeley took on the challenge of trying to figure out how long spores of ectomycorrhizal fungi could live in the soil (Bruns et al. 2009). He picked four Rhizopogon species (*R. occidentalis*, *R. salebrosus*, *R. vulgaris*, and *R. olivaceotinctus*), extracted the spores, and sprayed them onto soil that has no Rhizopogon spores. The soil/spore mixtures were packed in terracotta pots, covered with terracotta saucers, tied, and buried in a tree-less area at Point Reyes National Seashore. The reason for this was so that he could emulate the natural conditions that the spores would face in nature. These pots of soil would remain buried for 99 years. Each year for the first 4 years, we unearthed a pot of soil from each species, the soil/spore mixture within was mixed with sterile soil, and pine seedlings were planted in them. We grew the seedlings for six months and then examined the roots for colonization of *Rhizopogon.* We initially hypothesized that the spores would die off over time but the experimental evidence was contrary. We found that the spores actually became more alive over time! But what does becoming more alive mean?

What it means is that most of these spores start out being dormant, and they wake up over time. Analogous to a seed, a dormant spore cannot germinate and can only grow and partner with a seedling root after it had awaken from dormancy. Thus, a consequence of this dormancy means that the spores lay in the soil for years, waiting for the moment when by chance a pine seed would drop onto the soil and germinate. It is only then that the spore will germinate and form mycorrhizae with the seedling. This idea is along the same lines of thought as a "seedbank", where a seed lays dormant in the soil and waits for the proper conditions before it germinates. We call the waiting of spores in the soil for proper a condition to germinate a "sporebank".

What about other species of ectomycorrhizal fungi? Do they behave the same way as *Rhizopogon* and produce a sporebank? To answer this question, Tom collected forest soil (which we thought contained spores of many species), put them into terracotta pots, and buried them. After 6 years, we dug up these pots, planted seedlings in the soil and identified the species that have colonized the roots. As expected, spores of *Rhizopogon* species, particularly *R. vulgaris* and *R. salebrosus* could survive up to 6 years. The surprise came from the fact that *Suillus brevipes* could also survive up to 6 years in the soil. Even though *Suillus* is closely related to *Rhizopogon*, their fruiting structure (mushroom in *Suillus* vs. truffle in *Rhizopogon*) and the way they disperse their spores (wind in *Suillus* vs. rodents in *Rhizopogon*) are different. We only expected the rodent dispersed species to be resistant through time, but the results of this experiment proved otherwise.

So, all of these results together tells us that spores of suilloid ectomycorrhizal species can form a sporebank and remain alive in that sporebank for at least 6 years. Of course this is only the first 6 years of the experiment. We still have 93 years to go! Tom considered sticking around until the experiment is done.

References

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About the Author:
Nhu Nguyen is a PhD candidate at UC Berkeley studying under Tom Bruns. He enjoys collecting and eating mushrooms (the edible ones of course), describing new fungal species, and photography of plant and fungi. His research interest is in symbiotic interactions between fungi and other organisms. For more of his work, see his web page at http://www.flickr.com/photos/xerantheum/

President's Outstanding Service Awards

Presented at the Awards Ceremony by Bob Fulgency
December 15, 2012
Scotts Valley, California

Adele Mehta received the President's Outstanding Service Award in recognition of her many years as Second Vice President and as Foray Recorder. In addition to her fine work in those positions, she has headed up an important *Ad Hoc* Committee and has taken on many additional tasks at the request of the President. As Foray Recorder, she has played an essential role in getting the information about each species found on Annual Forays into the database housed at the Chicago Field Museum. While the rest of us who attended Annual Forays were enjoying ourselves in the field or attending lectures, she could be found in the display room attending to her exacting duties, often working late into the evening. NAMA is indeed fortunate to have such a devoted member.

Linnea Gillman received the President's Outstanding Service Award in recognition of her many years of work as Secretary as well as her many accomplishments as Chair of the 2010 Annual Foray. Her work as Secretary has been exceptional. The marathon Trustee meetings often last for countless hours and at times it is extremely difficult to keep track of the many comments and motions offered by the participants. She met and overcame the daunting challenge of keeping accurate records and then later preparing written versions of everything that happened at those meetings. In addition to her secretarial duties, Linnea acted as Chair for the 50th Anniversary Celebration of the Annual NAMA Foray. Hosted by the Colorado Mycological Society, this Foray was an extraordinary tribute to our club and its many talented and dedicated members. It was a hugely successful event -- due in large measure to the efforts of Linnea.

Dianna Smith received the President's Outstanding Service Award in recognition for her terrific work as Editor of the Mycophile. She took on this demanding position in December of 2011. Before Dianna became Editor, the Mycophile was a spotty publication at best with seemingly insurmountable delivery problems. Although this was not the fault of her predecessor, it was a predicament that demanded a quick and decisive solution. But happily, the first issue published under Dianna's leadership was a delightful surprise and put all my concerns about the publication aside. It was full of colorful photos and interesting articles. As a result of her resolve and willingness to put the time in to improve this publication, we now have an eminently readable and enjoyable newsletter - delivered in a timely fashion - that we can all be proud of. Thanks Dianna, for being willing to take on this very demanding and important position.

Cathy Cripps won NAMA's 2012 ***Award for Contributions to Mycology*** *and Dianna Smith won the* ***Harry and Elsie Knighton Service Award****. Details will be featured in the March-April edition of The Mycophile. In the meantime, get your 2013 nominations in for these awards to Gary Lincoff by April 1st. (See next page).*

NOMINATION GUIDELINES FOR NAMA ANNUAL AWARDS

The NAMA AWARD for Contributions to Amateur Mycology

•Nominations for this award should include a description of the accomplishments the nominee has made in the field of amateur mycology.

•A name alone is not a sufficient nomination; neither is a profile on a website.

•Nominations are accepted until April 1st of the award year.

•The recipient must be living at the time of the award.

•Nominees who were not selected to receive the award are automatically re-nominated for 4 additional years, after which the nominee's name has to be re-submitted, and it's up to the nominator to keep track of this.

•Selection among nominees is made by the voting of past award winners, and the award includes a plaque and lifetime membership in NAMA.

The NAMA Harry and Elsie Knighton Service Award

The *Harry and Elsie Knighton Service Award was established by the NAMA Board of Trustees to recognize and encourage persons who have distinguished themselves in service to their local clubs.* Each year's recipient is selected by the three most recent recipients of the Award.

Every NAMA-affiliated mycological club may nominate one candidate whom it feels has performed meritorious service during the current or preceding year, which has to be described!

Unselected nominees are automatically re-nominated for 2 additional years.

Nominations are accepted until April 1st of the award year.

The annual award consists of a plaque; publicity for the winner and club in The Mycophile; a one-year membership in the organization; and registration, housing and foray fees for the next NAMA Foray.

Send a single copy of a Nomination to: Gary Lincoff, New York Botanical Garden, Bronx, New York 10458 - or email: Gary@noahsquark.com

Two Volunteers Needed for NAMA Education Committee Positions

The NAMA Program Loan Librarian:

Carlene Skeffington has been Program Loan Librarian for many years. She has moved temporarily from New Hampshire to New Mexico and has taken the loan programs with her. Currently, NAMA offers more than fifty programs on mycology, most of them now on computer CDs. They can be borrowed free by NAMA members and the NAMA affiliated Clubs, and with a small fee by non-members. Members or Clubs can make one copy of any of the CDs for personal use only, for a small fee, as long as it is for a non-commercial use. The programs are very useful for Clubs to show at meetings or study groups or to add to their libraries. The job of the Program Loan Librarian is to send out the requested material and to receive and check it when it is returned. To view the program listings and directions for borrowing the programs, please sign on to: http://www.namyco.org/education/edprog.html, click on Education and view the listings and directions for borrowing the programs. Loan Programs volume has decreased, since the CDs can be copied, but there are always new members, non members and clubs who would like to borrow them.

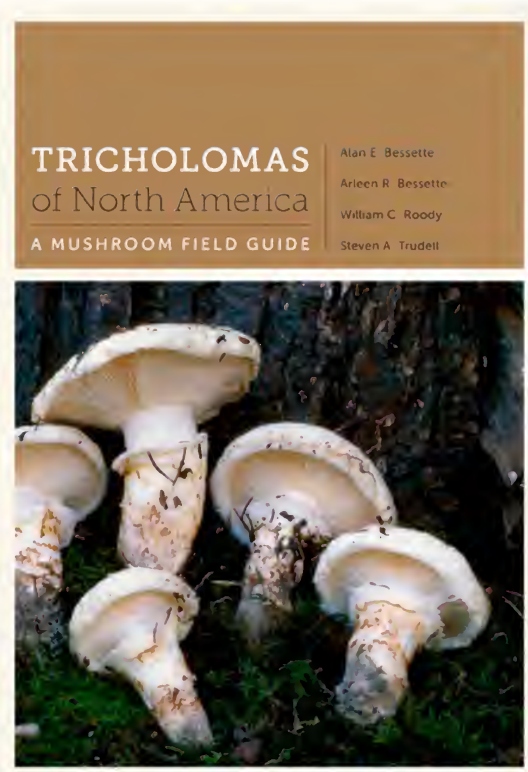
The Western Mushroom Teaching Kit Librarian:

Maggie Rogers has spent many years developing the contents of the Western Mushroom Teaching Kit and has requested that she be replaced by a NAMA member, preferably with some teaching experience and living in the Western part of the United States (Mailing costs are high.) View the contents of the Kit on the Education page of the NAMA website. The contents can be customized to the needs of the renter. We do have an Eastern Mushroom Teaching Kit, maintained and loaned out by Carol Dreiling. The Kit can be used in K-12 classes, introductory college classes, science museums and adult education classes. Maggie recently received much praise from a school in Pasadena, CA, that borrowed the Kit. The job of the Western Mushroom Teaching Kit Librarian is to send out the requested materials and to check them when they are returned.

If you are interested in either of these two jobs, please contact Sandy Sheine at: ssheine@aol.com. The outgoing Librarians and I will be happy to work with you if you take over these jobs.

Sandy Sheine: Education Committee Chairperson

Tricholomas of North America



A Mushroom Field Guide

Alan E. Bessette, Arleen R. Bessette

William C. Roody and Steven A. Trudell

2013

University of Texas Press Austin

ISBN 978-0-292-74233-8

$29.95

Tricholomas of North America is 208 pages in 7x10 format. The book is beautifully bound and illustrated. It begins with a 9-page introduction followed by a 16 page dichotomous key to species divided by general cap color with separate sections for species found in the east and the west. There is a one-page table of distinctive microscopic features. The descriptions of species include 71 fully described species. Typical descriptions are on one page with one to three images of the species on the facing page. There are twelve rare species that are not illustrated, six common and variable species with four illustrations, eight species with five illustrations, one species with six illustrations and one with eight illustrations. Fourteen unnamed species are illustrated and described in variable detail. The book concludes with a discussion of excluded species, glossary, references, and common and scientific name indexes. The photography is beautiful and the visual impact is stunning. Many images are ½ page, none are smaller than 1/3 page. While most of the photography is by the authors, 15 additional photographers contributed to the book.

I have tested the keys against pictures in my collection and the keys appear to work well. I was even able to figure out one of my mystery Tricholoma species that I had not located in other sources. I like the fact that many species are double-keyed – for example if the interpretation of cap color is likely to be variable, the mushroom keys out under multiple likely cap colors.

The descriptions appear accurate with strong emphasis on physical details and just enough microscopic information to confirm a find. I really appreciated the comments section for each species with the emphasis on how similar species can be distinguished.

The book is written with a minimum of technical terminology so that it is accessible to a general audience. I believe that both professionals and dedicated mushroom hunters are going to want this book in their collection.

Book Review by Michael Beug

SCIENCE DAILY: Fungi

Predatory Fungi Are Listening for Worms, Then Devouring Prey

Dec. 13, 2012 — For over 25 years, Paul Sternberg has been studying worms -- how they develop, why they sleep, and, more recently, how they communicate. Now, he has flipped the script a bit by taking a closer look at how predatory fungi may be tapping into worm conversations to gain clues about their whereabouts.

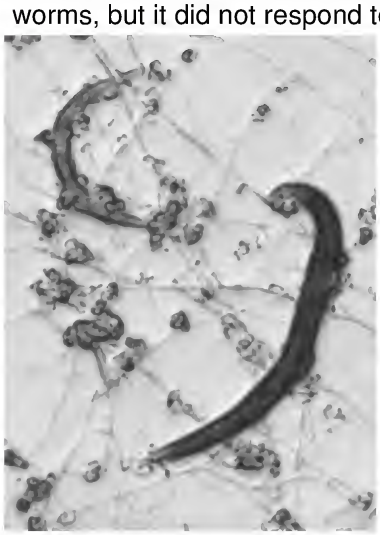
Nematodes, Sternberg's primary worm interest, are found in nearly every corner of the world and are one of the most abundant animals on the planet. Unsurprisingly, they have natural enemies, including numerous types of carnivorous fungi that build traps to catch their prey. Curious to see how nematophagous fungi might sense that a meal is present without the sensory organs -- like eyes or noses -- that most predators use, Sternberg and Yen-Ping Hsueh, a postdoctoral scholar in biology at Caltech, started with a familiar tool: ascarosides. These are the chemical cues that nematodes use to "talk" to one another.

"If we think about it from an evolutionary perspective, whatever the worms are making that can be sensed by the nematophagous fungi must be very important to the worm -- otherwise, it's not worth the risk," explains Hsueh. "I thought that ascarosides perfectly fit this hypothesis."

In order to test their idea, the team first evaluated whether different ascarosides caused one of the most common nematode-trapping fungi species to start making a trap. Indeed, it responded by building sticky, web-like nets called adhesive networks, but only when it was nutrient-deprived. It takes a lot of energy for the fungi to build a trap, so they'll only do it if they are hungry and they sense that prey is nearby. Moreover, this ascaroside-induced response is conserved in three other closely related species. But, the researchers say, each of the four fungal species responded to different sets of ascarosides.

"This fits with the idea that different types of predators might encounter different types of prey in nature, and also raises the possibility that fungi could 'read' the different dialects of each worm type," says Sternberg. "What's cool is that we've shown the ability for a predator to eavesdrop on essential prey communication. The worms have to talk to each other using these chemicals, and the predator is listening in on it -- that's how it knows the worms are there."

Sternberg and Hsueh also tested a second type of fungus that uses a constricting ring to trap the worms, but it did not respond to the ascarosides. However, the team says that because they only tested a handful of the chemical cues, it's possible that they simply did not test the right ones for that type of fungus.



"Next, the focus is to really study the molecular mechanism in the fungi -- how does a fungus sense the ascarosides, and what are the downstream pathways that induce the trap formation," says Hsueh. "We are also interested in evolutionary question of why we see this ascaroside sensing in some types of fungi but not others."

In the long run, their findings may help improve methods for pest management. Some of these fungi are used for biocontrol to try and keep nematodes away from certain plant roots. Knowing more about what stimulates the organisms to make traps might allow for the development of better biocontrol preparations, says Sternberg.

The full results of Sternberg and Hsueh's study can be found in the paper, "Nematode-trapping fungi eavesdrop on nematode pheromones," published in the journal *Current Biology*.

Nematodes are trapped in the sticky web of a worm-eating fungus. (Credit: Sternberg Lab / Caltech)

GETTING TO KNOW OUR WEBSITE

www.namyco.org

Small Things Considered *by Elio Schaechter (posted April 26, 2012) http://schaechter.asmblog.org/schaechter/*

What Is This Link to

"Mushrooms in Works of Art."?

This is the website of a registry that lists works of art, mainly Western, that display mushrooms. Now, why would anyone care about this? The project started about 10 years ago when mycologist Hanns Kreisel from Greifswald University in Germany and chemist Tjakko Stijve from Switzerland and I came together, impelled by the same thought, which was that depictions of mushrooms in art would give us some insight into their relationship to people of various times and cultures.

Pseudo Fardella, Italian, active in Tuscany second half, 17th century. *A Basket of Cherries, Apples, Plums, Chestnuts, Asparagus and Porcini on a Ledge*. Private collection.

Otto Marseus van Schrieck, Dutch, 1614/1620-1678. *Still Life with Insects and Amphibians.* Herzog Anton Ulrich Museum, Braunschweig, Germany.

We exchanged lists of such works of art and found that the couple of hundred items each of us had didn't overlap much. This suggested that the "population" of such works was quite large and that further efforts were called for. We became ever more alerted to "finds" in museums, in art books, and, of course, on the internet. The records of old sales by auction houses proved to be particularly fruitful. In time, new people came on board. The project currently is in the hands of a Belgian mycologist, Daniel Thoen, an artist and University of Wisconsin art professor, Nancy Mladenoff, and myself. The registry now consists of over 1200 items, mainly paintings. The single best-represented genre is Baroque still lifes, mainly Italian, Flemish, and Dutch.

What have we learned? Basically, what we already suspected, namely that some countries, especially Italy, are especially mycophilic. Mushrooms can be found in perhaps 10% of all Italian Baroque depictions of fruits and vegetables. Most commonly, the species portrayed are the highly prized Caesar's mushroom (*Amanita caesarea*) and the King bolete or porcino (*Boletus edulis*), which have been consumed avidly from Roman antiquity to this day. Some artists were particularly fond of mushrooms and painted them in a large number of their surviving works. Among them is an Italian only known by the unflattering name of Pseudo Fardella (meaning in the style of Fardella) and the Dutch artist of the forest understory, **Otto Marseus van Schrieck**.

A number of paintings show mushrooms being offered for sale by vegetable and fruit vendors. This is a good indication of what species were consumed at that time. Few poisonous mushrooms are seen in paintings from before the 18th century. This is surprising because the archetype of mushrooms, the red one with white dots (*Amanita muscaria* or the fly agaric) is cosmopolitan, abundant, and showy. One can speculate that this species was omitted because it is toxic enough that nowadays the trip of people who take it for "recreational" purposes" is often to the emergency room. One can imagine that displaying poisonous mushrooms above one's mantle was not exactly popular. This has changed and the fly agaric may well be the species that is most often depicted in recent times. Of interest is that in otherwise non-mushroom loving Great Britain, mushrooms had a great ascendancy in the 19th century. A particular genre, known as the Victorian Fairy Paintings, deals with the underworld of fairies and gremlins, often looking like Barbie dolls with wings. These imaginary figures are seen cavorting on the forest floor, often around or over mushrooms. Mystical mushrooms?

Giovanni Francesco Barbieri, known as "Il Guercino," Italian, 1591-1666. *The Greengrocer*. Private collection.

The registry is classified by period and region of origin. It provides a brief description of the mushrooms and, we hope, will entice scholars to probe more deeply into the historical questions that mushrooms elicit.

Why do I bring this up now? The reason is that the registry has recently been moved to the website of the North American Mycological Association and, thanks to its webmaster David Rust and with the help of Marjorie Young, has been expanded considerably. You are welcome to visit it and taste the delights of "artistic" mushroom hunting in cyberspace. Check out http://http://www.namyco.org/art_registry/index.html

Walter Jenks Morgan, British, 1847-1924. *A Fairy Ring*.

A Message from NAMA's New President

This message is for all members of NAMA, past and present, who see great potential for our organization. As of today, NAMA begins a new era in which we shed old ideas and develop a new paradigm. I want to thank the trustees who elected me President. I know I can count on your support as we put some wind in our sails and steer this stately old ship in a new direction.

To begin, NAMA has lowered dues for 2013. We reduced costs by electronic transmission of publications, and wanted to pass those savings to current members. Lower dues will provide incentive to join NAMA for people unaffiliated with clubs and members of our affiliated clubs.

I've already written some possible scenarios for change (May/June Mycophile 2012, p.22-23). Before we can implement new ideas, we must improve our basic foundation. NAMA needs new lines of communication, a more cohesive spirit of community, and leadership taking an active role in year-round governance. Regional district lines need to be redrawn and the way we elect officers and trustees needs an overhaul. New programs might include creating additional scholarships, and of course, supporting the new North American Mycoflora project. In the coming year, existing committees will take an active role in developing new information on the website and new programs for members.

People unite in groups because of a common interest, shared experiences and a desire to learn more. The very roots of NAMA's founding were to promote, pursue and advance the science of mycology. Originally organized as the People to People Committee on Fungi in 1959, NAMA was established as an independent organization devoted to amateur mycology in 1967. Over the past 50 years, we've lost many of our great field mycologists, and amateur mycology has taken a larger stage through the advent of technological tools. Now, thanks to the Internet, online keys, digital cameras and instantaneous communication, anyone interested in mushrooms can get a quick, although in most cases tentative, identification. Websites such as MushroomObserver.org provide a forum for debates about identity and systematics.

Mycological societies have taken on a larger role in education, public awareness, and popularizing mushroom culture. Many of our 78 affiliated clubs provide a wide range of classes, forays, intensive workshops, public mushroom fairs, and host websites with a wealth of basic information. NAMA needs to develop more communication, resources, regional activities and tools for clubs to build upon and become a central clearinghouse of current information. I would also like to promote more inter-club cooperation.

Recently, we established a Yahoo discussion group, which has 271 members (and growing) with an average of 30 messages per month. I strongly encourage you to join this group. NAMA membership is required. NAMA also hosts a Facebook page, with 157 members. This is a public group, and NAMA membership is not required.

Congratulations to Mycophile editor Dianna Smith, who just received the 2012 Elsie Knighton Service Award and the President's Award for Outstanding Service. Thanks to her, our newsletter is now going out on time, full of useful articles, information and photos. All of you who have a story about mushrooms, or a recipe, or photos from your club events, please send your items to Dianna.

I want to congratulate Martin Osis on his new role as First Vice President. Martin has a lot of energy and ideas. He will be a terrific asset to the Executive Committee. Milton Tam has been elected Region 9 Trustee, responsible for Washington, Oregon, Idaho, Montana, and Alaska.

Michael Beug will work in the coming year with Christian Schwarz as co-editor of *McIlvainea*. Please contribute articles to this valuable publication.

I look forward to serving as President of NAMA. If you have ideas and want to participate, please contact me directly, david.rust@sbcglobal.net or 510.468.5014. If you see areas that need improvement, I'd like to hear about those as well. Let's all work together to build NAMA into an organization with a new purpose and mission.

David Rust

North American Mycological Association

To promote, pursue and advance the science of mycology

2013 MEMBERSHIP APPLICATION

Name (s)_____

Street Address_____

City/State/Zip_____

Phone_____

E-mail_____

Joining as:

____$24 for members of affiliated clubs – electronic delivery of NAMA publications (individual or family)
Club Name_____
____$30 for members of affiliated clubs – mailed print versions of NAMA publications (individual or family)
Club Name_____
____$29 for other North American members – electronic versions (individual or family)
____$35 for other North American members – mailed print versions (individual or family)
____$35 for members outside North America – electronic versions
____$45 for members outside North America – mailed print delivery
____$15 for full-time students
School Name_____
____$60 for sustaining membership
____$500 for lifetime membership

____$30 for an affiliated club (Please state your club)
Club Name_____

Send check payable to NAMA to:
Ann Bornstein
61 Devon Court
Watsonville, CA 95076-1160

___I would be interested in making a donation to fund educational activities. Please contact me.

___I am interested in participating in the following activities_____
_____
_____

If you have questions about this application, contact Membership Secretary Ann Bornstein at:
annstitcher@charter.net

Annual dues may also be paid on line through PayPal. See http://www.namyco.org/join/application.html.

North American Mycological
Association
c/o Ann Bornstein
61 Devon Court
Watsonville, CA 95076

Address Service Requested

Newsletter of the North American Mycological Association
THE MYCOPHILE

Thuemenella cubispora.
Photo and text by John Plischke III

With the unusually dry summer of 2012, there was a lack of many of the larger fleshy fungi across the area. Sometimes droughts make us look harder and more appreciate the fungi we do find. Attached is a photo of *Thuemenella cubispora***.** It is one of four fungi that I found during an all day mushroom search.

Thuemenella cubispora grows on another ascomycete called *Hypoxylon rubiginosum*. This *Thuemenella* starts out being orange colored when young, then as it matures it becomes more yellowish with orangish tones. It can bruise orange over time and can have orange colored flesh. When mature it becomes greenish at places or develops greenish tones and has dark colored perithecia at this stage. Its flesh is creamy to yellowish colored. It occurs on fallen maple and box elder logs.